What is claimed is:

1. A method for carrying out a hands-free communication using a telecommunication terminal (100), especially a mobile telecommunication terminal (100), characterized in that at least one program for implementing a speech processing algorithm is at least temporarily loaded from a service server (400) into the telecommunication terminal (100) and implemented for use, at least for the duration of a communication connection.

2. The method as recited in Claim 1, further characterized in that at least one hands-free, echo cancellation, speaker verification, speaker recognition, speaker classification, voice verification, voice recognition, text-to-speech and/or noise reduction algorithm is at least temporarily loaded from the service server.

3. The method as recited in one of the preceding claims, further characterized in that speech signals are digitized and/or encoded for transmission.

4. The method as recited in one of the preceding claims, further characterized in that a connection between the telecommunication terminal (100) and a server-based speech recognition system (300) is established over at least one communication network.

5. The method as recited in one of the preceding claims, further characterized in that a plurality of algorithms are stored on the service server (400) for temporary loading.

6. The method as recited in one of the preceding claims, further characterized in that in order to load the at least one algorithm, a connection is established to the service server (400) over at least one communication network.

7. The method as recited in one of the preceding claims, further characterized in that the connection for loading is established directly between the service server (400) and the telecommunication terminal (100), or via an interposed server-based speech recognition system (300).

8. The method as recited in one of the preceding claims,

further characterized in that the connection for loading is established between the service server and the telecommunication terminal (100) in response to an automatic or user-defined request signal by the telecommunication terminal (100), or in response to a request signal of a server-based speech recognition system (300).

9. The method as recited in one of the preceding claims,

further characterized in that connection establishment between the telecommunication terminal (100) and the service server (400) and/or a server-based speech recognition system (300) is performed using respectively assigned identifiers, for example, using a CLI, ANI or HLR.

10. The method as recited in one of the preceding claims,

further characterized in that the connection between the telecommunication terminal (100) and the at least one communication network is by wire or wireless.

11. The method as recited in one of the preceding claims,

further characterized in that the telecommunication terminal (100) performs the transmission over one or multiple channels.

12. The method as recited in one of the preceding claims,

further characterized in that in addition to the speech signals, further signals, in particular, test and/or compensation signals, charging and/or identification parameters, and/or vector signals are transmitted.

13. The method as recited in one of the preceding claims,

further characterized in that in order to transmit speech signals, a conversion between different frequency bands and/or spectra is performed.

14. The method as recited in one of the preceding claims,

further characterized in that the selection of an algorithm to be currently used is made by the telecommunication terminal (100), a speech recognition system (300), or the service server (400).

15.   The method as recited in one of the preceding claims,

further characterized in that in order to test an algorithm which is currently used or which is to

be used, a test signal is output on the side of the telecommunication terminal (100) and

compared to the response signal that is received back.

16.   The method as recited in one of the preceding claims,

further characterized in that for the duration of the communication connection, the loading of

at least one algorithm occurs once or several times, especially in an updating manner.

17.   The method as recited in one of the preceding claims,

further characterized in that specific identification parameters and/or charging parameters are

transmitted by the telecommunication terminal (100) for further processing by a device

associated with a speech recognition system (300) and/or with the service server (400).

18.   The method as recited in one of the preceding claims,

further characterized in that the telecommunication terminal (100) performs a calibration of

an A/D conversion and/or D/A conversion (104, 105).

19.   The method as recited in the preceding claim,

further characterized in that the calibration is performed once for a communication

connection, continuously, and/or digitally.

20.   The method as recited in one of the two preceding claims,

further characterized in that the compensation signal used for the calibration is the speech

signal and/or a test signal.

21.   The method as recited in one of the two preceding claims,

further characterized in that especially in the case of multi-channel processing of at least two

microphone signals and/or for noise reduction, a procedure for locating the speech source is

carried out.

22.   A system for providing a hands-free communication for at least one

telecommunication terminal (100), especially a mobile telecommunication terminal, in

particular for carrying out the method recited in one of the preceding claims, the system

comprising a service server (400) which has means for providing at least one speech processing algorithm, and which is designed to transmit, in response to a defined request signal, at least one program for implementing a speech processing algorithm to at least one particular of the at least one telecommunication terminal (100) for at least temporary application implementation.

23.   The system as recited in one of the preceding claims,
further characterized in that the service server (400) includes means allowing at least one hands-free, echo cancellation, speaker verification, speaker recognition, speaker classification, voice verification, voice recognition, text-to-speech and/or noise reduction algorithm to be provided for the at least one telecommunication terminal (100) for at least temporary application implementation.

24.   The system as recited in one of the preceding claims,
further characterized by a server-based speech recognition system (300) and a charging and/or billing system (500).

25.   The system as recited in one of the preceding claims,
further characterized by at least one WEB server for providing the service server (400), the server-based speech recognition system (300) and/or the charging and/or billing system (500).

26.   The system as recited in one of the preceding claims,
further characterized by interface means for establishing communication connections (1, 2, 3) between the telecommunication terminal (100), the service server (400) and/or the server-based speech recognition system (300).

27.   The system as recited in one of the preceding claims,
further characterized by interface means for establishing connections (1, 2, 3, 4) for signal transmission between the telecommunication terminal (100), the service server (400), the server-based speech recognition system (300), and/or the charging and/or billing system (500).

28.   The system as recited in one of the preceding claims,

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further characterized by means for providing a communication connection (5, 6) between the service server (400) and/or the server-based speech recognition system (300) and the charging and/or billing system (500).

29. The system as recited in one of the preceding claims, further comprising a telecommunications (200) network designed for the transmission of speech signals, including at least one mobile telecommunications network, fixed network, (W)LAN and/or the Internet.

30. The system as recited in one of the preceding claims, characterized in that connection establishment between the telecommunication terminal (100), the service server (400), the server-based speech recognition system (300) and/or the charging and/or billing system (500) is performed using respectively assigned identifiers.

31. The system as recited in one of the preceding claims, characterized by means for converting a speech signal between different frequency bands.

32. The system as recited in one of the preceding claims, further characterized in that the telecommunication terminal (100), the speech recognition system (300) and/or the service server (400) has/have means associated therewith for selecting an algorithm to be currently used by the telecommunication terminal (100).

33. The system as recited in one of the preceding claims, further characterized in that the telecommunication terminal (100), the speech recognition system (300) and/or the service server (400) has/have means associated therewith for testing an algorithm which is currently used or which is to be used.

34. The system as recited in one of the preceding claims, further characterized in that the telecommunication terminal (100), the speech recognition system (300) and/or the service server (400) has/have means associated therewith for generating a test signal which is output via at least one loudspeaker (108, 110) of the telecommunication terminal (100) for testing an algorithm which is currently used or which is to be used, said test signal being compared to a response signal received via at least one microphone (107, 109) of the telecommunication terminal (100).

35.   A server-based speech recognition system (300) for a system as recited in one of the preceding claims, comprising means allowing at least one speech processing algorithm provided on a service server (400), especially a hands-free, echo cancellation, speaker verification, speaker recognition, speaker classification, voice verification, voice recognition, text-to-speech and/or noise reduction algorithm, to be selected to be at least temporarily loaded into, and implemented on, a particular telecommunication terminal (100) in response to identification parameters associated with the telecommunication terminal (100).

36.   A service server (400) for a system as recited in one of the preceding claims, comprising means allowing at least one speech processing algorithm provided on the service server (400), especially a hands-free, echo cancellation, speaker verification, speaker recognition, speaker classification, voice verification, voice recognition, text-to-speech and/or noise reduction algorithm, to be selected to be at least temporarily loaded into, and implemented on, at least one particular telecommunication terminal (100) in response to identification parameters associated with the telecommunication terminal (100).

37.   A charging and/or billing system (500) for a system as recited in one of the preceding claims, comprising means for charging for a service which is at least temporarily provided by a server-based speech recognition system (300) to a particular telecommunication terminal (100) and/or for a program which is loaded from a service server (400), at least temporarily, for implementing a speech processing algorithm, especially a hands-free, echo cancellation, speaker verification, speaker recognition, speaker classification, voice verification, voice recognition, text-to-speech and/or noise reduction algorithm, in response to identification and/or charging parameters associated with the telecommunication terminal (100).

38.   A telecommunication terminal (100) for a system as recited in one of the preceding claims, comprising means (101, 103) for at least temporary loading at least one speech processing algorithm from a service server (400), and for temporary implementation.

39.   The telecommunication terminal (100) as recited in the preceding claim, comprising means (101, 103) for at least temporary loading at least one hands-free, echo cancellation, voice and/or speech verification and/or noise reduction algorithm from the service server (400), and for temporary implementation.

40.   The telecommunication terminal (100) as recited in one of the preceding claims, further comprising a processor for executing the implemented algorithm.

41.   The telecommunication terminal (100) as recited in one of the preceding claims, characterized in that the telecommunication terminal is designed as a mobile telecommunication terminal, especially as a PDA, MDA, mobile telephone, or a DECT telephone.

42.   The telecommunication terminal (100) as recited in one of the preceding claims, characterized in that the telecommunication terminal is based on a GSM standard or a UMTS standard.

43.   The telecommunication terminal (100) as recited in one of the preceding claims, further comprising an A/D converter (104) and a D/A converter (105).

44.   The telecommunication terminal (100) as recited in the preceding claim, further comprising a device (106) for calibrating the A/D converter (104) and the D/A converter (105) and/or for performing digital calibration.

45.   The telecommunication terminal as recited in the preceding claim, characterized in that the telecommunication terminal is designed to automatically perform the calibration using a speech signal and/or a test signal as the compensation signal.

46.   The telecommunication terminal (100) as recited in one of the preceding claims, further comprising an encoder unit (102).

47.   The telecommunication terminal (100) as recited in one of the preceding claims, characterized by a device for converting a speech signal between different frequency bands.

48.   The telecommunication terminal (100) as recited in one of the preceding claims, further comprising interface means for wired and/or wireless connection of at least one external microphone (109) and/or loudspeaker (110).

49.   The telecommunication terminal (100) as recited in one of the preceding claims, further comprising at least one microphone channel and/or loudspeaker channel, in particular at least two microphone channels and/or loudspeaker channels, and/or means for multi-channel signal transmission.